

R E M A R K S

Careful consideration has been given to the Official Action of June 10, 2004 and favorable reconsideration of the application is earnestly solicited on the basis of the amendatory action which has been taken.

The Examiner has rejected the claims under 35 U.S.C. §112 second paragraph. In this respect the Examiner has raised objections to Claims 1, 4 and 5.

The Examiner has rejected Claims 1 - 5 and 6 - 9 as being unpatentable over Tonkin in view of King under 35 U.S.C. §103.

Claim 5 has been rejected under 35 U.S.C. §103 as being unpatentable over Tonkin and King and further in view of Blomenkamp et al.

Claims 10 and 11 have not been rejected on formal grounds or on cited art.

The Rejection Under 35 U.S.C. § 112

Claim 1 has been amended to avoid the objections raised by the Examiner against Claim 1 at line 5 and at line 9. The amendatory action obviates the objection concerning antecedent basis for the recited limitations.

Claim 4 has been amended so that it is clearly dependent from Claim 1 as assumed by the Examiner.

Claim 5 has been amended at line 2, in order to avoid the objection concerning insufficient antecedent basis.

By reason of the above amendatory action it is respectfully submitted that the rejection under 35 U.S.C. §112 second paragraph is no longer applicable.

Claim Rejection Under 35 U.S.C. § 103

Claim 1 has been amended to incorporate the subject matter from Claim 11. In view of the fact that the Examiner has not rejected Claim 11 on cited art, it is taken that Claim 11 when incorporated into Claim 1 renders Claim 1 allowable.

In this respect Claim 11 recites the distinctive limitation that the number of lights of the segment which are lit is directly and inversely proportional to vehicle speed. Thus, as the vehicle speed decreases the number of lights which are lit will increase in direct proportion to the reduction in speed. As will be pointed out in detail hereinafter Tonkin and the other art of record are conditioned on increasing the number of lights which are lit as a function of deceleration i.e. rate of change of speed.

In the Tonkin patent the brake warning system is based on measurement of the deceleration (speed variation with respect to time) by means of any system that would allow obtaining this speed variation with respect to time i.e. by a decelerator, whereas the present invention is based solely on measurement of the speed at each instant of braking and (not by rate at speed change) comparison thereof with the lighting series determined initially by

the controller, for an initial braking speed.

Therefore, the Tonkin patent requires a decelerator in the system, or a processor for measuring the speed variation with respect to time, to obtain the accelerations/decelerations of the vehicle, whereas this element or process is not utilized in the present invention.

The technical solution in the application must therefore be regarded as directed to another different system of braking indication, since the same parameters as those in the Tonkin patent (based on decelerations) are neither used nor represented. It is therefore, submitted that the solution of the invention is not obvious from Tonkin, alone or in combination with King or Blomenkamp.

In this regard the device of the invention, for identical braking conditions, emits warning signals to vehicles behind it, substantially different from those emitted by Tonkin.

Two specific cases of braking are given by way of example:

- a) Prolonged braking, in which constant pressure is applied on the brake pedal to produce a constant deceleration until the vehicle comes to a complete standstill.

In Tonkin, during the entire braking period, only a pair, or at most two pairs of lights (depending on the relative value of deceleration), would light up until the vehicle comes to a stop (constant deceleration). Precisely at the moment when the vehicle is coming to a complete standstill, the animated or intermittent display device would flash to indicate

that the vehicle is completely at a standstill.

In the present invention during the speed reduction in a constant manner, the lights will light up progressively, with a constant rate, until the vehicle comes to a complete stop, at which time all the lights will be lit up indicating zero speed.

- b) Initial very abrupt braking, without total standstill. In Tonkin on exceeding deceleration thresholds, the entire device will light up as a result of the high deceleration even if the vehicle does not come to a complete standstill. If thereafter the vehicle undergoes decreasing deceleration pairs of lights will extinguish (with certain delay). In the invention no matter how abrupt the braking the system will continue comparing the speed at each instant with the values of the lighting series as calculated initially by the controller and the corresponding pairs of lights, will be lit up at the same time as the instantaneous speed value coincides with a value of the series as calculated, without the system lighting up in totality.

In both situations the invention presents advantages over Tonkin.

- a) In Tonkin, in the event of braking with constant deceleration, the effect of progressive indication and dynamic evolution of the braking is lost, because the indication will be constant, the same as its deceleration and finally, when the vehicle stops, the indication will move to animated

display. In the invention, the illuminated lights will indicate to the following vehicles a reduction of speed that is taking place progressively, by the pairs of lights lighting up progressively at the same time as the speed at each instant coincides with the corresponding value of the lighting series determined by the controller on initiating the braking, it being unquestionable that, without need for any supplementary representation, when the indication is totally lit up this means that the vehicle is at a standstill, because the lighting up of the last pair of lights of the indication always corresponds, to the lighting series determined by the controller, to zero speed of the vehicle. In other words, instead of a constant illumination of lights as in Tonkin, the lights will be progressively lit up directly and in inverse proportion to speed.

- b) In Tonkin, in the case of abrupt braking without a complete standstill, abrupt braking provokes an abrupt deceleration, giving a maximum instantaneous lighting signal (all of the pairs of lights available light up at the same time) and thereafter upon decreasing deceleration the lights go out (or two pairs of lights at a time, depending on how much the deceleration decreases) with certain delay (to avoid extinguishing a pair of lights due to small oscillations of decreasing value of deceleration). In the invention the type of braking is known for the rapidity and quantity of lights that will light up and which will continue to light up progressively until the vehicle ceases to lose speed, no

partial extinguishing of the lighting ever occurring. Hence information, more intuitive and dynamic is given to the following vehicles.

By reason of the above action and comments it is respectfully submitted that Claim 1 is in allowable condition along with the claims dependent therefrom.

Favorable consideration of the application on this basis is earnestly solicited.

Respectfully submitted,



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